

Remarks/Arguments

The Office Action mailed November 1, 2007 has been reviewed and carefully considered.

Claims 1 and 7 have been amended. Claim 13 has been added. No new matter has been added. Claims 9-11 stand allowable. The allowability of claims 9-11 are unaffected by the amendment to claim 7, from which they depend, as claim 7 recites essentially the same features as it did in its prior form. Claims 1-13 are now pending in this application.

Reconsideration of the above-identified application in view of the following remarks is respectfully requested. It should be noted that the Applicants are not conceding in this application that the amended claims in their prior form are not patentable over the art cited by the Examiner, as the present claim amendments have been made only to facilitate expeditious prosecution of the application. The Applicants respectfully reserve the right to pursue these and other claims in one or more continuations and/or divisional patent applications.

Claims 1-8 and 12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kim (U.S. Patent No. 6,459,203) in view of Vrionis, et al. (U.S. Patent No. 5,397,966) (hereinafter 'Vrionis').

Aspects of the present principles include a gas discharge lamp enclosed by a grounded, electrically conductive screening that effectively shields a surrounding environment from interfering electromagnetic radiation emanating from the gas discharge lamp. The electromagnetic radiation may be "re-captured" by the screening via induced currents that are drawn through the screening to a ground potential. In certain implementations of the present principles, the screening comprises a thin layer or very coarse

grid to enable a sufficient amount of light permeability, which in turn may result in a relatively low conductivity (see Specification, p. 12, lines 13-16). One feature of an aspect of the present principles includes a thin conductor track situated on the screening that has a lower ohmic resistance than main portions of the screening (see, e.g. Specification, p.12, lines 16-18; p. 12, line 29 to p. 13, line 2). The conductor track may reduce the resistance of the entire screening layer and may thereby enhance the effectiveness in draining interference currents (see, e.g. Specification, p. 12, line 32 to p. 13, line 2).

Claim 1 recites, inter alia:

"A gas discharge lamp with. . .a translucent, electrically conductive screening (9, 23) which screens the discharge vessel (2) . . . and a conducting track, situated along a surface of the gas discharge lamp screening (9) that encloses the discharge vessel, having a lower ohmic resistance than portions of the gas discharge lamp screening (9) that is employed to enhance the conductivity of the gas discharge lamp screening (9)."

In support of the rejection of claim 1, the Examiner has cited Kim and Vrionis, alleging that their combination renders features of claim 1 obvious. Kim is directed to backlight apparatus for a liquid crystal display device. The apparatus of Kim includes discharge lamps that are within a grounded housing (see, e.g., Kim, FIG. 4, elements 2, 6 and 7; column 2, lines 59-60). However, Kim does not disclose or remotely suggest that the grounded housing has a conducting track with a lower resistivity than other portions of the grounded housing. Indeed, Kim nowhere discusses the resistivity of the housing in any way. Thus, Kim does not disclose or render obvious a conducting track inside a screening with a lower ohmic resistance than other portions of the screening, as recited in claim 1.

Moreover, Vrionis also fails to disclose the conductive track feature of claim 1. Vrionis describes an electrodeless lamp that includes an electrically conductive screening. Although Vrionis states that the screenings disclosed do shield the environment from radio

frequency electromagnetic radiation (see Vrionis, column 3, lines 53-56), Vrionis does not describe any screening that includes a conductor track with a lower ohmic resistance than other portions of the screening. The screenings described by Vrionis include transparent or semi-transparent “fingers” made of various conductive materials (see, e.g., Vrionis, column 5, lines 8-16), light permeable, finely woven mesh of thin metal strands (see, e.g., Vrionis, column 5, line 65 to column 6, line 6) and other homogeneous screenings. None of the screenings disclosed in Vrionis incorporate a low resistance conductive track along an enclosing surface of the screening layer that enhances the conductivity of the screening.

Accordingly, neither Kim nor Vrionis, taken singly or in combination, disclose or render obvious a conducting track inside a screening with a lower ohmic resistance than portions of the screening, as recited in claim 1. Thus, claim 1 is believed to be patentable over Kim and Vrionis. Furthermore, claims 2-6 and 12 are also believed to be patentable due at least to their dependencies on claim 1. Thus, withdrawal of the rejection of claims 1-6 and 12 is respectfully requested.

Another aspect of the present principles includes employing the screening of a gas discharge lamp to act as a power supply line for at least one of the electrodes of the lamp (see, e.g., Specification, FIGS. 7 and 8; p. 11, lines 3-31). In accordance with this aspect, the screening may simultaneously act as a supply line or a return line for one of the electrodes (see, e.g., Specification, p. 11, lines 7-8). Utilizing the screening as a power supply line is a relatively economical and simple design in, for example, a headlight implementation, because a separate, screened supply line for an electrode that is remote from a lamp holder is not needed (see, e.g., Specification, p. 4, lines 22-25). Claim 7 includes some of these features,

stating, inter alia, that “the screening (9) of the gas discharge lamp (1) serves as a power supply line and is electrically connected to one of the electrodes (5).”

In support of the rejection of claim 7, the Examiner has stated that the housing of the electrode lamps described in Kim serves as a supply line; specifically, the Examiner states that the housing “suppl[ies] the illumination of light.” (see November 1, 2007 Office Action, p. 2) The basis of the Examiner’s assertion is unclear, as the disclosure of Kim does not state that the housing exhibits luminescence in any way. Moreover, “supply line,” as employed in the Specification of the present application clearly refers to a power supply line. In any event, the housing described in Kim certainly does not serve as a power supply line. The power supply of the electrode lamps described in Kim is provided by the ground wire (1) and the high voltage wires (3a-c) (see Kim, FIG. 4; column 2, line 59 to column 3, line 5). Nowhere does Kim disclose or remotely suggest that the screen may serve as a supply line.

Furthermore, Vrionis also fails to disclose that any of the screening embodiments act as a power supply line to an electrode. Firstly, the discharge lamps disclosed in Vrionis are electrodeless. Vrionis describes using an induction coil to provide luminescence (see Vrionis, column 2, lines 3-9). Secondly, power is supplied to the induction coil via an electrical contact at the bottom of the base cap of the lamp (see FIGS. 1-4, 6). Power is not supplied to the induction coil through any of the screens described.

In addition, modifying either one of Kim or Vrionis to configure the housing or a screening of either respective reference to serve as a power supply line is not obvious. Because alternating currents that operate modern gas discharge lamps are typically between peak values of 12 V and -73 V at a frequency of 250 to 1000 Hz, the screening serving as the supply line may not be directly connected to a ground potential that draws induced currents

from the screening (see, e.g., Specification, p. 4, lines 25-32). To enable the free flow of induced current and thus, screening of the surrounding environment from electromagnetic radiation, as described above, one aspect of the present principles includes utilizing suitable capacitive elements to provide a high frequency coupling to the screening serving as a power supply line (see, e.g., Specification, p. 4, lines 28-32; p. 11, lines 7-12; see FIGS. 7-8). In contrast, Kim and Vrionis, taken singly or in combination, do not disclose or remotely suggest how a screening may act as a power supply line.

Accordingly, utilizing a screening to serve as a power supply line would not be obvious to one of ordinary skill in the art view of Kim and Vrionis. Thus, claim 7 is believed to be patentable over Kim in view of Vrionis. Moreover, claim 8 is believed to be patentable over Kim in view of Vrionis due at least to its dependency from claim 7.

Additionally, it should be noted that another aspect of the present principles includes coupling a screen enclosing a discharge vessel to the screen portion of a coaxial cable serving as a power supply to at least one electrode (see, e.g., Specification, FIG. 2, elements 9, 14, 12, 13, and 5; p. 9, lines 1-5). The screen of the coaxial cable is connected, for example, to the outer surface of a lamp holder, which is usually grounded, via suitable connections (18), thereby providing a conduit through which induced current in the screen enclosing the discharge vessel may freely flow (see, e.g., Specification, Fig. 2).

Claim 13 has been added to claim at least some these features. Claim 13 includes, inter alia: “[a] gas discharge lamp with . . . electrodes (4, 5) projecting into the discharge vessel (2) . . . wherein at least one of the electrodes (5) is electrically connected to a supply line (13) comprising a screening (14) within a coaxial cable, and the screening (9) of the gas

discharge lamp (1) is connected with electrical conduction to the screening (14) of said supply line (13)."

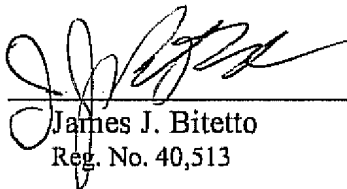
Neither Kim nor Vrionis, taken singly or in any combination, disclose or remotely suggest coupling the screen of a discharge vessel to the screen portion of a coaxial cable. Indeed, neither Kim nor Vrionis disclose the use of a coaxial cable, let alone electrically connecting a screening of a coaxial cable to a lamp screening. Therefore, claim 13 is patentable over Kim and Vrionis.

In view of the foregoing, the applicants respectfully request that the rejections of the claims set forth in the Office Action of November 1, 2007 be withdrawn, that pending claims 1-13 be allowed, and that the case proceed to early issuance of Letters Patent in due course.

It is believed that no additional fees or charges are currently due. However, in the event that any additional fees or charges are required at this time in connection with the application, they may be charged to applicant's representatives Deposit Account No. 14-1270.

Respectfully submitted,

Dated: 12/4/07

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